

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2003-057195

(43)Date of publication of application : 26.02.2003

(51)Int.Cl.

G01N 23/04  
G01N 23/223  
G21K 1/06  
G21K 7/00  
H05K 3/00  
H05K 3/46

(21)Application number : 2001-241631

(71)Applicant : X-RAY PRECISION INC

(22)Date of filing : 09.08.2001

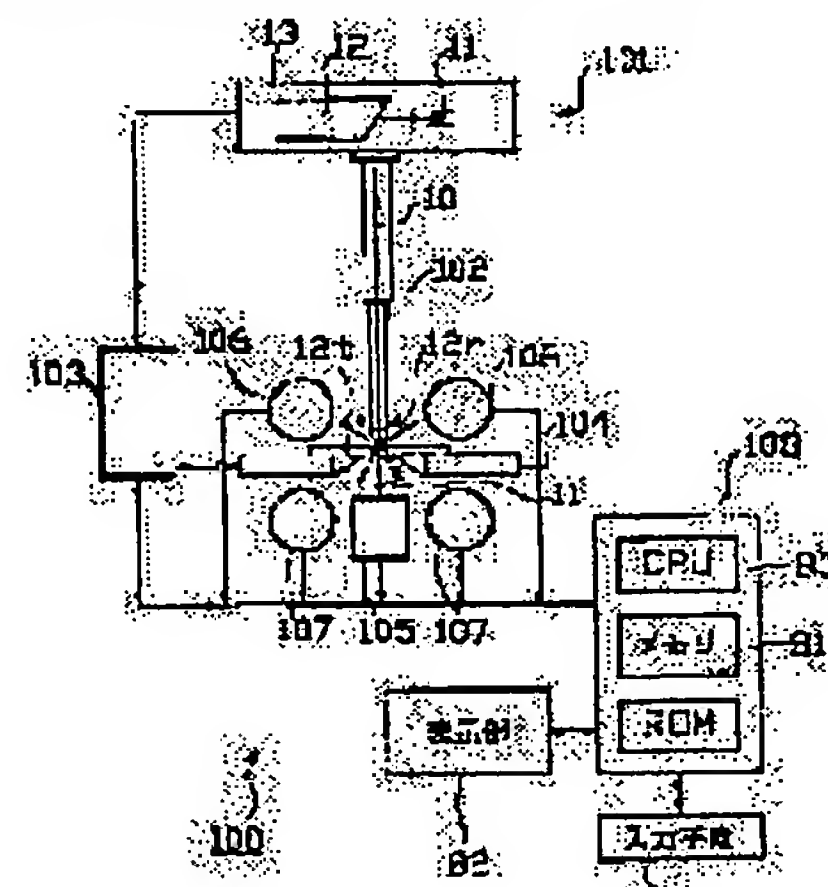
(72)Inventor : MINOBAYASHI TAEKO  
HIRAI ATSUSHIKO  
NISHINO SHIGEHIRO  
HOSOKAWA YOSHINORI

## (54) METHOD AND APPARATUS FOR ANALYZING THREE-DIMENSIONAL STRUCTURE

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To provide a means capable of accurately, simply and rapidly obtaining three-dimensional information of a multilayer structure with an X-ray as a probe in a three-dimensional structure analysis of the multilayer structure.

**SOLUTION:** An apparatus 100 for analyzing the three-dimensional structure comprises an X-ray source 101, an X-ray converging element 102 for converging the X-ray 10 generated from the source 101 on a sample S, an X-ray scanning mechanism 103, a sample stage 104 for mounting the multilayer structure as the sample, a transmitted X-ray detector 10 for detecting the transmitted X-ray, a reflecting side fluorescent X-ray detector 106 for detecting a fluorescent X-ray generated at the reflecting side, a transmitted side fluorescent X-ray detector 107 for detecting the fluorescent X-ray generated at the transmission side, and a control arithmetic unit 108 for controlling the mechanism 103 and obtaining three-dimensional information of the structure based on detected values of the detector 105, the detector 106, the detector 107 to image-process the information.



83  
100 3次元構造分析装置  
101 X線源  
102 X線収束素子  
103 ステージ機構  
104 試料ステージ  
105 透過X線検出器  
106 反射側蛍光X線検出器  
107 透過側蛍光X線検出器  
108 制御装置

## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

BEST AVAILABLE COPY

---

[Date of registration]

[Number of appeal against examiner's decision  
of rejection]

[Date of requesting appeal against examiner's  
decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office

**BEST AVAILABLE COPY**